SUPPORTING INFORMATION

Aggregation-Induced Resonance Raman Optical Activity (*AIRROA*): A New Mechanism for Chirality Enhancement

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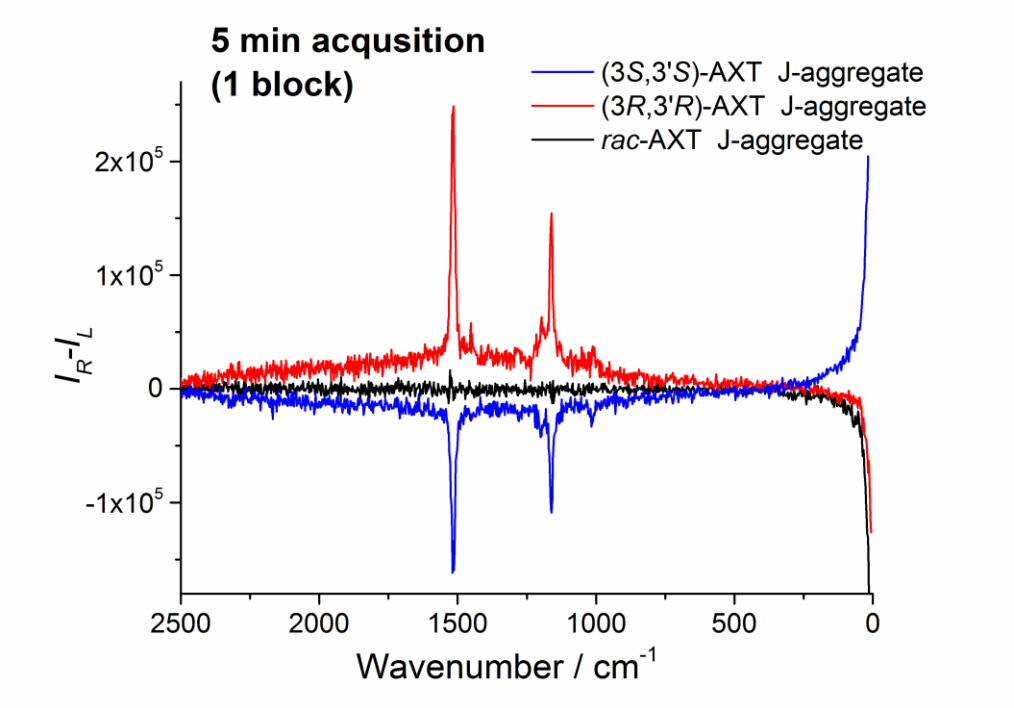

Figure S1. RROA spectra of (3*R*,3'*R*), (3*S*,3'*S*) and racemic astaxanthin 3:7 water/acetone aggregates (red, blue and black lines, respectively). A single block (5 minutes acquisition).

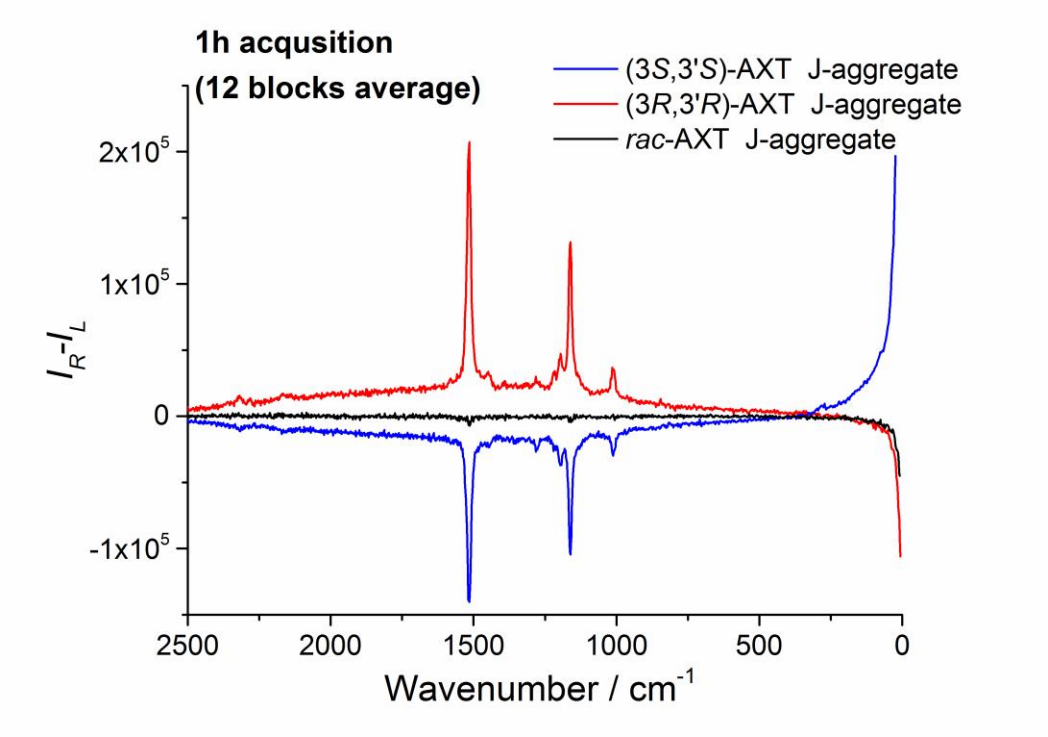

Figure S2. RROA spectra of (3*R*,3'*R*), (3*S*,3'*S*) and racemic astaxanthin 3:7 water/acetone aggregates (red, blue and black lines, respectively). Averaged over 12 blocks.

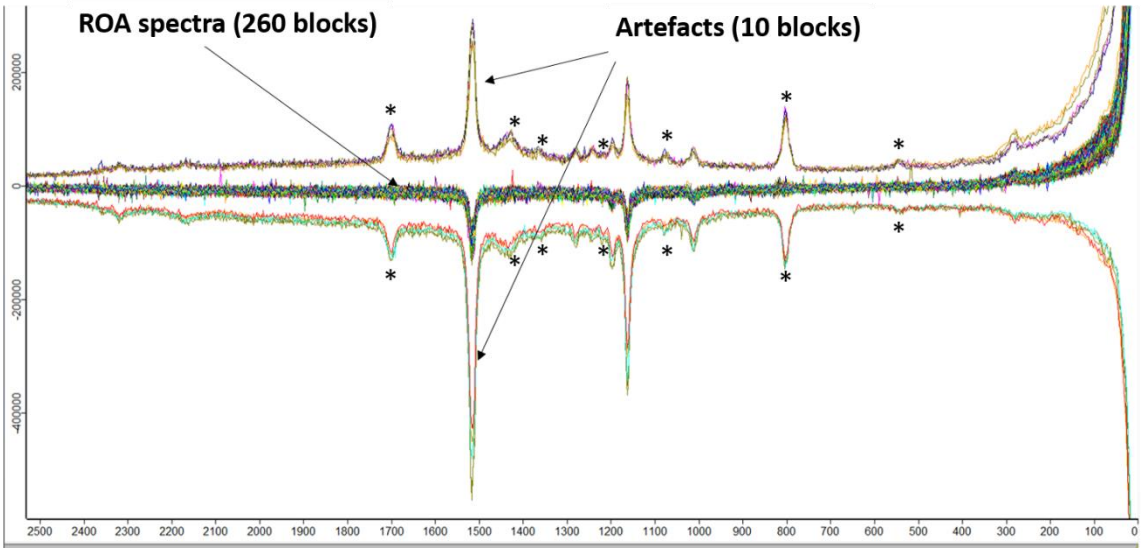

Figure S3. Set of ROA spectra (5 min acquisitions) of (3*R*,3'*R*) and (3*S*,3'*S*)-astaxanthin J-aggregates without (260 spectra) and with artefacts (10 spectra), that can be clearly distinguished from the true spectra of aggregates due to the high-intensity bands (of the same sign as others) assigned to the solvent (marked with the asterisk).

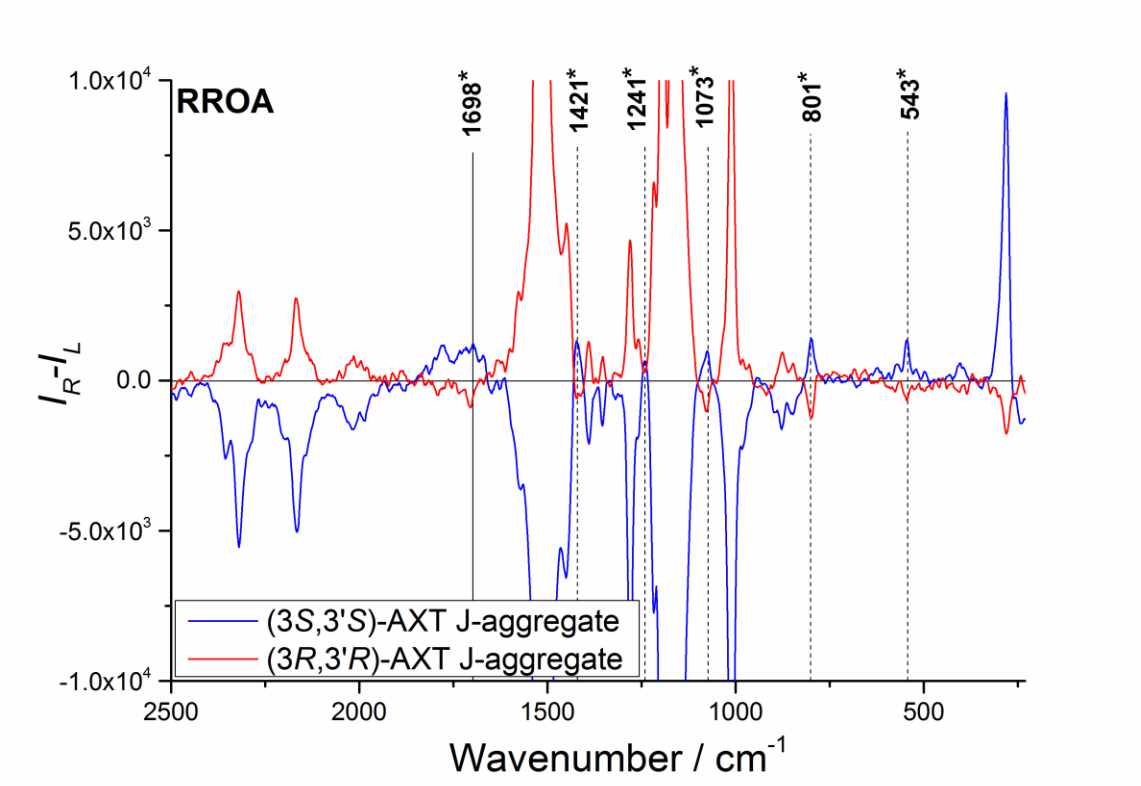

Figure S4. Zoomed, background subtracted RROA spectra of (3*R*,3'*R*) and (3*S*,3'*S*)-astaxanthin J-aggregates. Marked acetone bands exhibit chirality transfer.

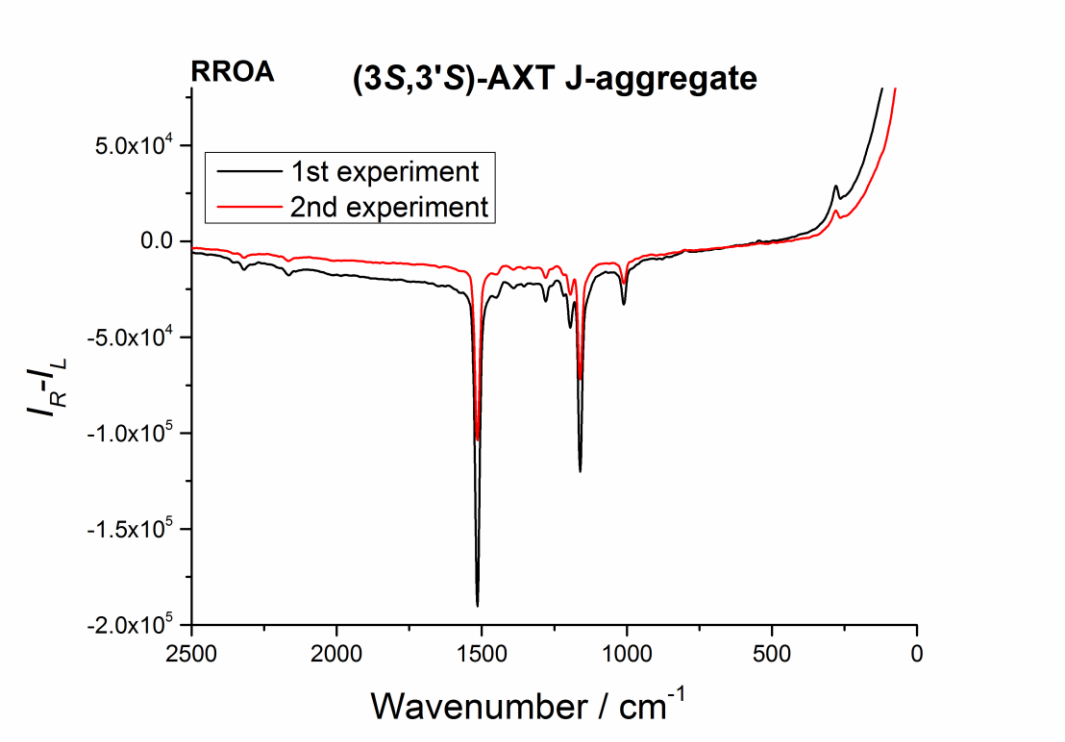

Figure S5. RROA spectra of (3*S*,3'*S*)-astaxanthin J-aggregates obtained from two independent measurements from two individual samples.

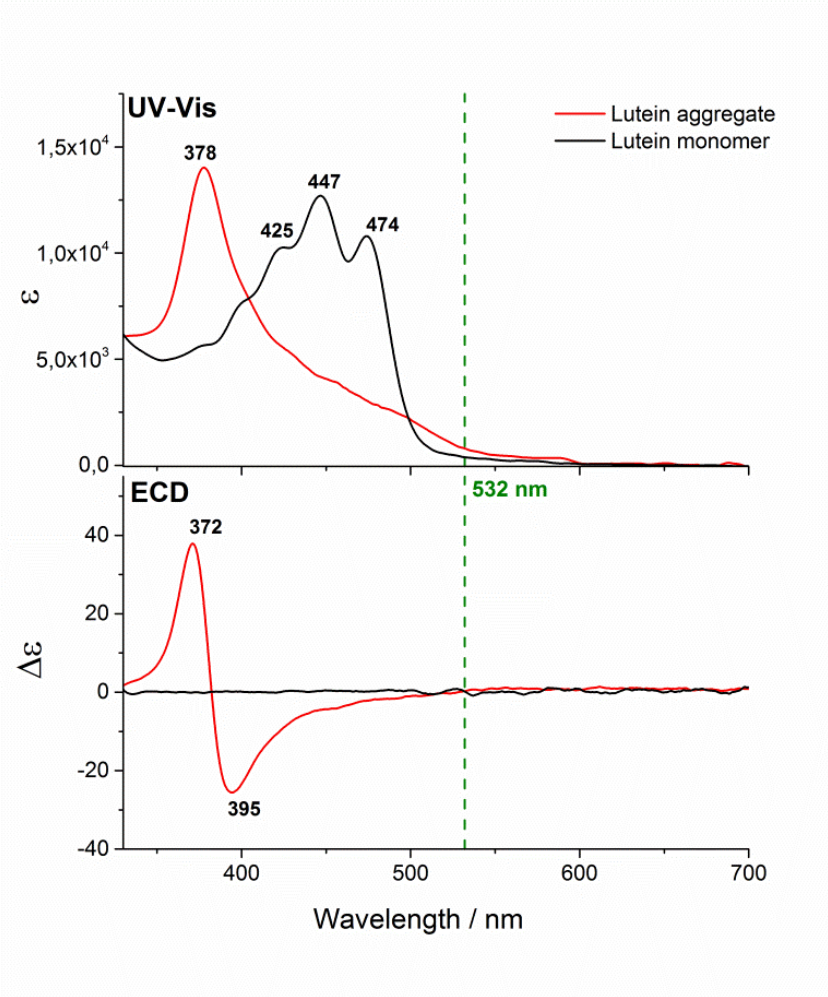

Figure S6. UV and ECD spectra of lutein aggregates and monomer (red and black lines, respectively).